

# Model KECG

## Egg Crate Grilles

### Introduction

KMC Return / Exhaust Grilles utilize core of cubical grid and mostly used where maximum free area is desired and “see through” is not a concern.

These Grilles are typically used in ceiling applications where “see through” sight lines are minimized to directly below the grille.

### Application

- Recommended for general return or exhaust of room air
- High free area offering lowest sound and pressure levels
- “Egg Crate” construction similar in appearance to many lighting fixtures
- Surface mounted

### Product Features

- 12.7mm x 12.7mm x 12.7mm aluminum core
- Aluminum frame
- Registers include a factory attached, opposed blade volume control damper
- Powder coated to RAL 9010 as standard
- Maximum size one piece construction is 1200mm x 1200mm
- Larger sizes shipped in multiple sections for field assembly.

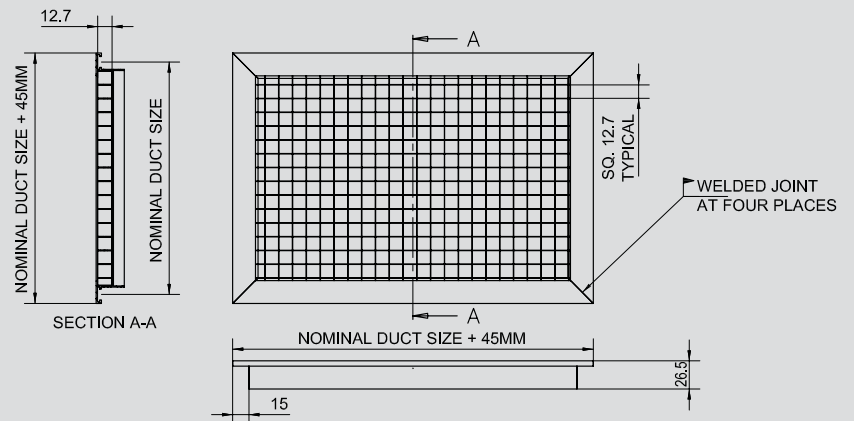
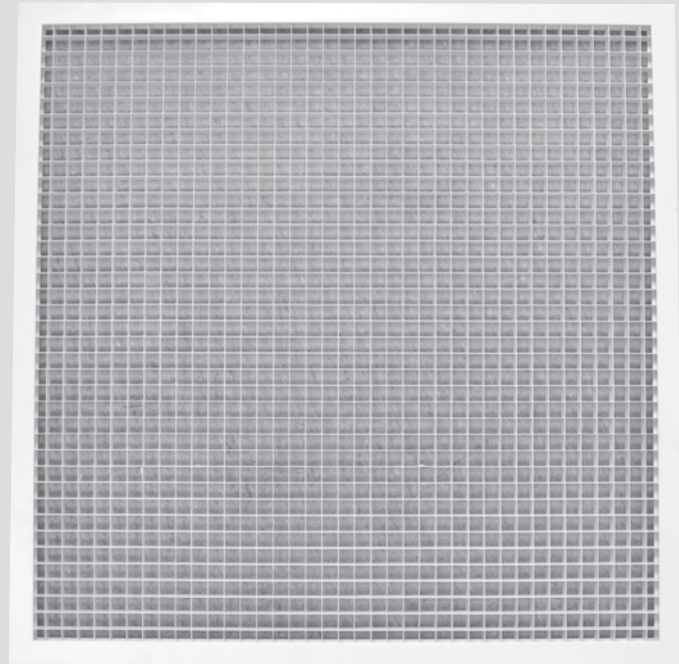
### Options

- Mounting holes in frame neatly countersunk
- Custom Colors

### Selection Procedure

The selections can be made by means of a straight read-off from the “Performance Data” for the selected Model.

- Determine the Air flow rate per outlet.
- Select the Grille based on required Air flow rate against the outlet velocity, limiting pressure drop and sound level requirements.



### Product Selection Check List

- Select Size (L x W) length based on desired performance characteristics.
- Select outlet type by Model Number.
- Select Finish.

### Performance Data

NOMINAL SIZE		Nominal Duct m <sup>2</sup>	Core Area m <sup>2</sup>	Core Velocity (m/s)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
Width	Height				Ps	-2.5	-2.5	-5.0	-7.5	-12.5	-17.5	-22.5	-27.5	-32.5
200	100	0.020	0.015	CMH	51	85	119	136	170	187	221	255	272	340
				NC	<20	<20	<20	<20	<20	<20	20	23	26	31
200	150	0.031	0.024	CMH	85	136	187	221	272	323	357	408	442	544
				NC	<20	<20	<20	<20	<20	<20	22	25	28	33
200	200	0.041	0.034	CMH	119	187	255	306	374	442	493	561	629	748
				NC	<20	<20	<20	<20	<20	20	23	27	29	34
300	150	0.046	0.038	CMH	136	204	272	357	425	493	561	629	697	833
				NC	<20	<20	<20	<20	<20	21	24	27	30	35
250	250	0.064	0.055	CMH	204	306	408	510	612	714	816	901	1003	1207
				NC	<20	<20	<20	<20	<20	22	26	29	31	36
350	200	0.072	0.062	CMH	221	340	459	561	680	799	901	1020	1139	1360
				NC	<20	<20	<20	<20	<20	23	26	29	32	37
400	200	0.083	0.072	CMH	255	391	527	646	782	918	1037	1173	1309	1564
				NC	<20	<20	<20	<20	<20	23	27	30	32	37
300	300	0.093	0.082	CMH	306	442	595	748	901	1054	1190	1343	1496	1785
				NC	<20	<20	<20	<20	20	24	27	30	33	38
500	200	0.103	0.090	CMH	323	493	663	816	986	1156	1326	1479	1649	1972
				NC	<20	<20	<20	<20	20	24	28	31	34	38
450	250	0.116	0.103	CMH	374	561	748	935	1122	1326	1513	1700	1887	2261
				NC	<20	<20	<20	<20	21	25	28	31	34	39
350	350	0.126	0.113	CMH	408	629	833	1037	1241	1445	1666	1870	2074	2482
				NC	<20	<20	<20	<20	21	25	29	32	34	39
600	250	0.155	0.138	CMH	510	765	1020	1275	1530	1785	2023	2278	2533	3043
				NC	<20	<20	<20	<20	22	26	30	33	35	40
400	400	0.165	0.151	CMH	544	816	1105	1377	1649	1921	2193	2465	2754	3298
				NC	<20	<20	<20	<20	22	26	30	33	36	40
600	300	0.186	0.169	CMH	612	918	1241	1547	1853	2159	2465	2771	3094	3706
				NC	<20	<20	<20	<20	23	27	30	33	36	41
550	400	0.227	0.209	CMH	765	1156	1530	1921	2295	2686	3060	3451	3825	4590
				NC	<20	<20	<20	<20	24	28	31	34	37	42
500	500	0.258	0.239	CMH	867	1309	1751	2193	2618	3060	3502	3944	4369	5253
				NC	<20	<20	<20	20	24	28	32	35	38	42
550	550	0.312	0.292	CMH	1071	1598	2125	2669	3196	3740	4267	4794	5338	6392
				NC	<20	<20	<20	21	25	29	33	36	39	43
600	600	0.372	0.349	CMH	1275	1921	2550	3196	3825	4471	5100	5746	6375	7650
				NC	<20	<20	<20	21	26	30	34	37	39	44

\*\* Other sizes can be manufactured on special request

### Notes :

Normal Size represents duct size

### Test Standard

ANSI / ASHRAE standard 70

### Sound Levels

NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10-12 watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands.

### Pressure

Ps represents static pressure requirement. Total pressure can be calculated as  $P_t = P_s + P_v$

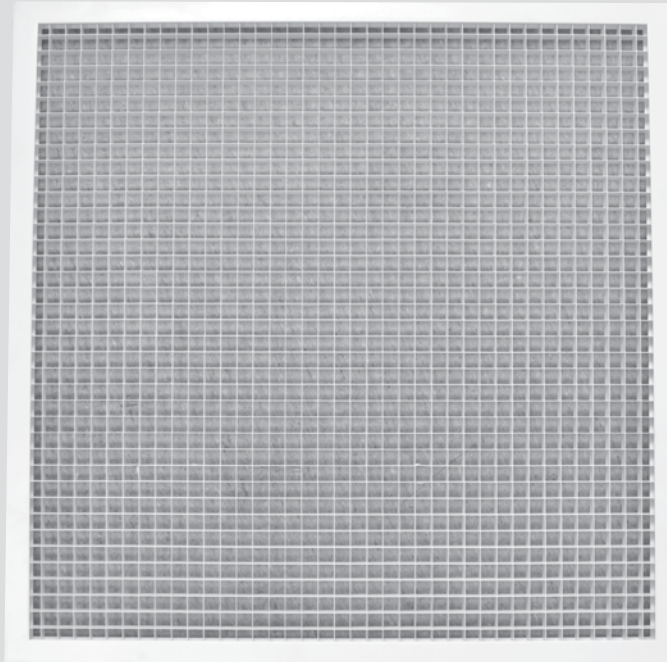
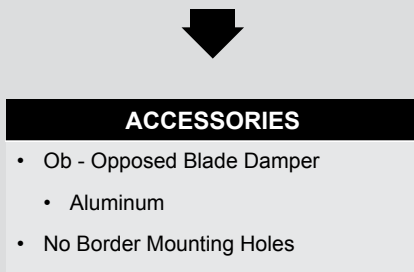
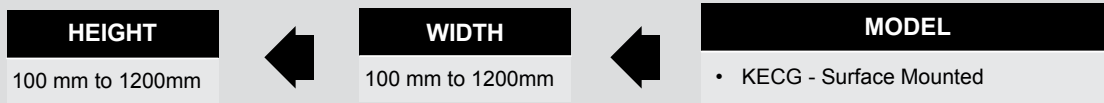
$P_v$  is the air velocity pressure in the duct

All pressures are stated and calculated in Pa

# Model KECG

## Egg Crate Grilles

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### Typical Specification - Egg Crate Grilles (Grid Core)

The return grilles shall be model KECG by KMC and shall integrate with the ceiling style as scheduled. The core shall be an aluminum grid consisting of a 12.7 mm x 12.7 mm x 12.7 mm cells, and shall have a minimum free area of 90%.

For surface mounting applications, the border shall be extruded aluminum, and shall include countersunk screw holes for installation.

Lay-in models shall include extension panels where required for the scheduled duct size and grid system module size.

Finish shall be powder coated with RAL 9010 or custom color as specified by the Architect.

Provide optional aluminum opposed blade volume control dampers as scheduled.

Dampers shall be adjustable through the face of the register.

